Product Overview/Applications

The PGR14 provides a 14.4 ft² (1.34 m²) growth area and a 58.25 inch (1480mm) growth height making this chamber suitable for a range of applications including plant science, bioengineering, and soil and food sciences. Shipped fully assembled, the PGR14 fits through standard doorways. The chamber comes standard with a closed-loop lighting system that uses 5-foot lamps mounted into fixed canopies. Please consult Conviron with your particular application and area of research and we will provide you with an overview of the available options.

Lighting

The standard light intensity for the PGR14 is 875 micromoles/m²/s using both T8 fluorescent and halogen incandescent lamps. The result is a broad based lighting spectrum. Also standard is a closed-loop lighting system (programmed in micromoles) which allows for precise and repeatable control of light output while also automatically adjusting for lumen maintenance. Lamp heat is controlled and managed by the refrigeration system.

Airflow

Airflow for the PGR14 is distributed uniformly upward using Conviron’s innovative Unifloor® air distribution plenum. This airflow configuration promotes uniformity as well as proper gas exchange at the plant’s leaf surface. The unit includes fresh air intake and exhaust ports which are adjustable to allow up to 20 ft³/min (0.57m³/min.) of air exchange.

Refrigeration

Cooling for the PGR14 is provided by a side mounted water-cooled condensing unit with hot gas bypass for continuous compressor operation. An electronic modulating valve provides tight temperature control while ensuring quiet operation. Pressure transducers are included for monitoring the status of the refrigeration system. Alternative refrigeration methods are available depending on site-specific and/or user-defined requirements. Consult the factory for heat rejection information and other options for cooling.

Experiment Protection

User programmable “set and forget” alarms track the chamber’s operation versus user-defined set points. This allows for exceptionally accurate monitoring without the need for adjustment every time the set point is redefined. Backup “high/low” alarms provide a further level of protection while visual and audible notification is provided when any alarm is activated. Contacts for connection to a building management system are also included.

Key Product Attributes

• Closed-loop lighting system with dimming control
• 58.25 inch (1480mm) growth height and 875 umoles/m²/s light intensity
• Shipped fully assembled – fits through standard doorways
• Product certifications/markings: CSA (NRTL), CE

Performance Data

<table>
<thead>
<tr>
<th>Temperature Range (°C)</th>
<th>Interior Capacity</th>
<th>Growth Area</th>
<th>Growth Height</th>
<th>Exterior Dimensions (WxDxH)</th>
<th>Light Intensities (6in. from lamp)</th>
<th>Electrical Service</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 – 45 lights ON</td>
<td>69.5ft³</td>
<td>14.4ft²</td>
<td>58.25&quot;</td>
<td>95&quot; x 35&quot; x 83.5&quot;</td>
<td>875 µmoles/m²/s</td>
<td>120/208-3Ø-60Hz</td>
<td>1445lb.</td>
</tr>
<tr>
<td>4 – 45 lights OFF</td>
<td>(1968l)</td>
<td>(1.34m²)</td>
<td>(1480mm)</td>
<td>2415 x 890 x 2120 (mm)</td>
<td>@ 25°C</td>
<td>220/380-3Ø-50Hz</td>
<td>(655kg)</td>
</tr>
</tbody>
</table>
CONVIRON MODEL PGR14
PLANT GROWTH CHAMBER

NOTES:
1. STANDARD REFRIGERATION SYSTEM IS WATER COOLED (1/2"Ø (13mmØ) CONNECTION).
2. REQUIRE A MINIMUM OF 2" (51mm) FROM REAR OF CHAMBER TO BACK WALL.
3. CASTER OPTION ADDS 2" (51mm) TO OVERALL HEIGHT OF CHAMBER.
4. DEPTH DIMENSION IS CHAMBER SIZE ONLY. DIMENSION DOES NOT INCLUDE DOOR LATCH OR PIPING ON BACK WALL.
5. LENGTH AND WIDTH DIMENSIONS ±1/4 (6mm). HEIGHT DIMENSION ±1" (25mm). DO NOT SCALE DRAWING.

FRONT ELEVATION

SECTION A-A

PLAN VIEW

- RIGHT HAND CONTROL PANEL
- CONTROL PANEL
- BALLAST COVER
- FRESH AIR
- LAMP CANOPY
- EXHAUST AIR
- TELSAIR ®
- UNIFLOOR ®
- INSTRUMENT PORTS (2)
- REFRIGERATION UNIT
- AIR FLOW
- CONDENSER WATER CONNECTION POINT (SEE NOTE 1)
- PURIFIED WATER CONNECTION POINT 1/4"Ø (6mmØ) (OPTIONAL)
- DRAIN LINE 3/4"Ø (19mmØ)
- ELECTRICAL CONNECTION POINT

PGR14 PLANT GROWTH CHAMBER
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